

WHAT IS CLAIMED IS:

1. A light emitting device drive circuit for driving  
a light emitting device in accordance with an input signal, the  
5 circuit comprising:

a current source for generating constant currents each  
being supplied to the light emitting device either in a light  
emitting state or an extinction state in accordance with an input  
signal;

10 the light emitting device to which a current is supplied  
by the current source; and

a resistor connected in parallel with the light emitting  
device,

wherein the light emitting device emits light and  
15 quenches light emission in accordance with a drive current which  
is a subtraction of a current supplied to the resistor from the  
current supplied by the current source.

2. The light emitting device drive circuit according  
20 to claim 1, wherein a value of the resistor is set so as to increase  
the drive current supplied to the light emitting device when a  
forward voltage of the light emitting device is decreased in  
connection with a temperature rise due to light emission, the drive  
current being increased by an amount of a current for compensating  
25 for an intensity of the light from the light emitting device which

is decreased due to the decrease of the forward voltage.

3. A light emitting device drive circuit for driving  
a light emitting device in accordance with an input signal, the  
5 circuit comprising:

a current source for generating constant currents each  
being supplied to the light emitting device either in a light  
emitting state or an extinction state in accordance with an input  
signal;

10 the light emitting device to which a current is supplied  
by the current source;

a coil connected at one end to an anode of the light  
emitting device; and

a resistor connected between the other end of the coil  
15 and a cathode of the light emitting device,

wherein the light emitting device emits light and  
quenches light emission in accordance with a drive current which  
is a subtraction of a current supplied to the coil and the resistor  
from the current supplied by the current source.

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4. The light emitting device drive circuit according  
to claim 3, wherein values of the coil and the resistor are set  
so as to increase the drive current supplied to the light emitting  
device during a rising response delay period in a transition from  
25 an extinction state of the light emitting device to a light emitting

state, the drive current being increased by an amount for shortening the rising response delay period.

5        5. The light emitting device drive circuit according  
to claim 4, wherein the values of the coil and the resistor are  
set so as to increase the drive current supplied to the light emitting  
device when a forward voltage of the light emitting device is  
decreased in connection with a temperature rise due to light  
emission, the drive current being increased by an amount of a current  
10 for compensating for an intensity of the light from the light  
emitting device which is decreased due to the decrease of the forward  
voltage.

6. A light emitting device drive circuit for driving  
15 a light emitting device in accordance with an input signal, the  
circuit comprising:

a current source for generating constant currents each  
being supplied to the light emitting device either in a light  
emitting state or an extinction state in accordance with an input  
20 signal;

the light emitting device to which a current is supplied  
by the current source;

a resistor connected at one end to an anode of the light  
emitting device; and

25 a coil connected between the other end of the resistor

and a cathode of the light emitting device,

wherein the light emitting device emits light and quenches light emission in accordance with a drive current which is a subtraction of a current supplied to the resistor and the  
5 coil from the current supplied by the current source.

7. The light emitting device drive circuit according to claim 6, wherein values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting  
10 device during a rising response delay period in a transition from an extinction state of the light emitting device to a light emitting state, the drive current being increased by an amount for shortening the rising response delay period.

15 8. The light emitting device drive circuit according to claim 7, wherein the values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting device when a forward voltage of the light emitting device is decreased in connection with a temperature rise due to light  
20 emission, the drive current being increased by an amount of a current for compensating for an intensity of the light from the light emitting device which is decreased due to the decrease of the forward voltage.